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Benefits and Challenges facing Coal Refuse-Fired Plants

Benefits of Coal Refuse-Fired Plants

- Coal refuse-fired plants provide an important public-private partnership to address critical pollution and safety issues through removal, remediation and reclamation of polluting coal refuse piles
- Acid mine drainage (AMD) from abandoned coal mines and coal-refuse piles is a major source of water pollution in Pennsylvania with over 3,300 miles of streams being impacted
- In Pennsylvania, coal refuse-fired plants have removed more than 200 million tons of coal refuse for use as fuel and remediated millions more tons of coal refuse through the use of the resulting beneficial use ash
- Thousands of acres of land have been remediated and reclaimed through these operations
- Land, water and air pollution are permanently eliminated which results in an improved environment and a higher quality of life for all members of the public
- Remediation of coal refuse sites energizes local watershed groups to prioritize their clean-up efforts in the same watersheds
- Significant local, county and state emergency services costs are avoided by the removal of coal refuse piles
- The ash from coal refuse-fired alternative energy plants is beneficially used in both surface mine reclamation and for injection into deep mines to prevent subsidence and mine fires
- Areas reclaimed by coal refuse-fired alternative energy plants have been returned to commercial development and community uses. Panther Creek Power and Ebensburg Power projects demonstrate the reclamation success stories from the operations of two Pennsylvania coal refuse-fired alternative energy plants:
    - ***Panther Creek Power Project***: Four high quality streams from the mountains above Nesquehoning, PA formerly flowed into coal refuse piles, being polluted by AMD as well as other pollutants which were then transported into the Nesquehoning Creek. Those coal refuse piles have now been removed, remediated and reclaimed with the streams being restored, such that they now support a healthy fish population both above and below the reclaimed area.

- ***Ebensburg Power Project***: Reclamation activities at the Revloc, PA mine site have resulted in the restoration of aquatic life to approximately 6 miles of the South Branch of Blacklick Creek. Three million tons of coal refuse was removed and about one million tons of coal refuse was remediated on site using beneficial use ash from a coal refuse-fired power plant. This resulted in a reduction of 93% acidity, 92% iron, 71% manganese and 95% aluminum from the site's surface water discharge to the creek. The project costs were about $24,000,000.

- The 14 operating coal refuse-fired plants in Pennsylvania support more than 800 direct jobs in engineering, operations and the skilled trades. These jobs are very important to the communities in which these plants are located

- In 2006, Pennsylvania's Bureau of Abandoned Mine Reclamation estimated the cost to eliminate abandoned mine land (AML) problems and complete the cleanup of AML-AMD sites in Pennsylvania to be approximately $15 billion dollars and take nearly 500 years

- The primary source of monies available for mine reclamation are reclamation fees imposed under the Federal Surface Mining Conservation and Reclamation Act. In 2014, Pennsylvania received $44 million dollars in federal grant monies from these fees. However, the amount collected and distributed to states via this program has diminished over the past several years and will likely will continue to decrease due to the retirement of coal fired power plants and their conversion to burn natural gas and the corresponding reductions in the amount of coal mined.

The Operating Challenges Facing Coal Refuse-Fired Alternative Energy Plants

- Coal refuse-fired plants face multiple challenges, threatening their economic viability and capability to continue to beneficially use coal waste piles and reclaim mine lands

- Coal refuse piles in the proximity of many existing coal refuse-fired plants have been successfully removed, requiring the use coal refuse from piles at ever-greater distances from the facilities resulting in significantly higher transportation costs

- Consequently, the distance the alkaline CFB ash is being transported to remediate mines and coal refuse sites is also increasing with a corresponding increase in operating costs

- Available coal refuse is of lower quality, reduced heating value (BTU content) and higher sulfur content, requiring greater quantities to be transported and processed as fuel with higher operating costs for processing, limestone and add-on environmental controls

- New federal and state environmental regulatory requirements and the corresponding capital and operating and maintenance costs represent an ever increasing operating expense imposed upon coal refused-fired plants and a threat to their future ability to be economic

The Regulatory Challenges Facing Coal Refuse-Fired Electric Generating Units (EGUs) today:

Federal Issues

- ***Cross State Air Pollution Rule (CASPR)*** - Bituminous coal refuse-fired EGUs were not allocated adequate SO_2 allowances for Phase 2 of CSAPR. In many cases, the Phase 2 SO_2 allowance allocations are considerably less than the Phase 1 allocation and it is impossible for the sources to be compliant without buying additional allowances in the marketplace. The Phase 2 allocations were established using emission rates that are more stringent than NSPS levels for new coal refuse-fired units. It is worth noting that states, like Pennsylvania, are already submitting fine particulate matter ($PM_{2.5}$) attainment and maintenance State Implementation Plans (SIPs) prior to the implementation of the SO_2 and NOx state budgets specified by CSAPR, prior to the implementation of the Mercury and Air Toxics Standard (MATS) rule and prior to the implementation of the 2010 SO2 National Ambient Air Quality Standard (NAAQS).

- ***Mercury and Air Toxics Standards (MATS)*** - Most coal refuse-fired EGUs cannot meet the MATS acid gas emission standards but some can meet the SO_2 surrogate emission standard which is an alternative compliance demonstration option. However, all of the ARIPPA coal refuse-fired member plants meet the MATS mercury emission rate standard. In fact, many of these coal refuse-fired units were included in the EPA Maximum Achievable Control Technology (MACT) Mercury Floor that was used to develop the MATS mercury standard.

- ***EPA's proposed Clean Power Plan*** – Fundamentally, that plan establishes CO_2 emission reduction targets that cannot be achieved by coal or coal refuse-fired EGUs. Consequently the mandated state plans will force electric generation away from fossil fuel fired sources to other means of generating electricity. There will be little opportunity for coal refuse-fired EGUs to operate in the electric energy market under these circumstances. Implementation of the Clean Power Plan, as proposed, would likely force retirements of coal refuse-fired EGUs.

- ***EPA's definition of Waters of the United States (WOTUS) -*** The definition significantly expands the definitions of "stream" and "waters of the United States" through their "NEXUS" concept. The expansion impacts the mining, reclamation and remediation projects associated with coal refuse increasing the costs of mining and reclamation activities to the point of the possible forced retirement of coal refuse-fired EGUs.

- ***EPA's Final Rule on Coal Combustion Residuals (CCRs) -*** This rule appears to be designed to eliminate the use of fossil fuels as a means to generate electricity. EPA's arbitrary approach to this rulemaking appears to be encouraging litigation by environmental groups and others citizens in federal courts to accomplish through these courts the actions which they cannot accomplish through a rulemaking process. That action is the regulation of CCRs as a hazardous material under Subtitle C of the Resource Conservation and Recovery Act (RCRA). This appears to be another situation where the industry and legislators and their constituents will be affected by a legal settlement to which they are not a party. This process has come to be known as "sue and settle."

How Can You Help Coal Refuse-Fired EGUs?

- ARIPPA needs your help to keep coal refuse-fired EGUs doing their good work and achieving the results that are so important to areas impacted by coal refuse. These results include multi-media environmental benefits as well as achieving these reclamations and remediation projects. For this to occur, we are asking for your assistance in addressing technical and other errors in the regulatory process in a fashion that would result in reasonable and appropriate costs and burdens to these facilities that would ultimately allow the coal refuse-fired EGUs to continue to operate and compete in the electric energy market.